

What is claimed is:

1. A network calculator system comprising:

a server connected to a network;

5 a storage connected to the network and to the server through a plurality of transmission paths; and

a management device connected to the network for recording a correspondence between the transmission paths and devices included in the transmission paths,

10 wherein if a device fails, which is included in the transmission path through which the server accesses data stored in the storage, the server or the storage notifies the management device of the faulty device, and said management device judges whether the notified faulty 15 device is included in another transmission path, and if the notified faulty device is included in another transmission path, said management device determines the transmission path through which the server accesses data stored in the storage and also the another transmission 20 path as being unavailable and causes the server to stop using the unavailable transmission paths when the server accesses the storage.

2. A network calculator system according to claim 1 further

25 comprising a fiber channel switch connected to the network, the server and the storage for notifying of a faulty device included in the fiber channel switch,

wherein the fiber channel switch is included in the transmission paths.

3. A network calculator system comprising:

5 a server connected to a network for managing its own device information and returning the device information in reply to a request;

10 a storage connected to the network and to the server by a plurality of transmission paths for managing its own device information and returning the device information in reply to a request; and

15 a management device connected to the network for managing device information on the server and the storage,

20 wherein said management device records a correspondence between transmission paths through which the server accesses data stored in the storage and devices included in the transmission paths, and makes the request to the server and the storage for the device information on a regular basis, and judges from the returned device information whether there is any faulty device, and determines transmission paths which include the faulty device as being unavailable, and causes the server, which accesses through the transmission paths when an application program is executed, to stop using the 25 unavailable transmission paths.

4. A network calculator system according to claim 3 further

comprising a fiber channel switch connected to the network, the server and the storage for managing its own device information and returning the device information in reply to a request,

5 wherein the management device makes the request to the fiber channel switch for the device information on a regular basis.

5. A network calculator system comprising:

10 a server connected to a network;
 a storage connected to the network and to the server by a plurality of transmission paths; and
 a management device connected to the network for recording a correspondence between transmission paths and
15 devices included in the transmission paths,

 wherein if a device is restored, which is included in the transmission path through which the server accesses data stored in the storage, the server or the storage notifies the management device of the restored device, and
20 said management device judges whether the restored device is included in another transmission path, and if the restored device is included in another transmission path, said management device determines the transmission path through which the server accesses data stored in the
25 storage and also the another transmission path as being available, and causes the server, which accesses through the transmission paths when an application program is

executed, to start using the transmission paths.

6. A network calculator system according to claim 5 further comprising a fiber channel switch connected to the network,
5 the server and the storage for notifying of restoration of a faulty device included in the fiber channel switch,
wherein the transmission paths include the fiber channel switch.

10 7. A network calculator system comprising:

a server connected to a network for managing its own device information and returning the device information in reply to a request;

a storage connected to the network and to the server
15 by a plurality of transmission paths for managing its own device information, and returning the device information in reply to a request; and

a management device connected to the network for managing device information on the server and the storage,

20 wherein said management device records a correspondence between transmission paths through which the server accesses data stored in the storage and devices included in the transmission paths, and makes the request to the server and the storage for the device information
25 on a regular basis, and stores the returned device information, and judges whether a device status changes from abnormal condition to normal condition, and if a

device status changes from abnormal condition to normal condition, said management device determines transmission paths as being available, which include the device of which status changes from abnormal condition to normal condition, 5 and causes the server, which accesses through the transmission paths when an application program is executed, to start using the transmission paths.

8. A network calculator system according to claim 7 further 10 comprising a fiber channel switch connected to the network, the server and the storage for managing its own device information and returning the device information in reply to a request,

wherein the management device makes the request to 15 the fiber channel switch for the device information on a regular basis.

9. A management method in a management device, provided in a network calculator system having a server and a 20 storage, wherein each of which is connected to a network, wherein the server and the storage are connected to each other by a plurality of the transmission paths, and wherein each of which notifies of a faulty device included in the transmission paths through which the server accesses data 25 stored in the storage, said management method comprising: managing the server and storage device information; receiving a notification of a faulty device from the

server or storage;

recording a correspondence between transmission paths through which the server accesses data stored in the storage and devices included in the transmission paths;

5 determining a transmission path as being unavailable if the notified faulty device is included in the transmission paths; and

causing the server, which accesses through the unavailable transmission path, to stop using that 10 transmission path when the server accesses the storage.

10. A management method in a management device, provided in a network calculator system having a server and a storage, wherein each of which is connected to a network, 15 wherein the server and the storage are connected to each other by a plurality of the transmission paths, and wherein each of which notifies of a faulty device included in the transmission paths through which the server accesses data stored in the storage, said management method comprising:

20 managing the server and storage device information; receiving a notification of a failure device from the server or storage;

recording a correspondence between transmission paths through which the server accesses data stored in the 25 storage and devices included by the transmission paths;

requesting for the device information to the server and the storage on a regular basis;

storing the returned device information;
judging whether a device status changes from
abnormal condition to normal condition;
determining a transmission path as being available
5 if the transmission path include the device of which status
changes from abnormal condition to normal condition; and
causing the server, which accesses through the
transmission paths when an application program is executed,
to start using the transmission paths.